



DHMH Extreme Cold Emergency Plan 2012 Version 1.0

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Record of Changes

Date	Description	Draft Number
November 2011	Initial document drafted	Draft Version 1.0
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Summary

Purpose

The Maryland State Cold Weather Emergency Plan, developed by the Maryland Department of Health and Mental Hygiene (DHMH), guides DHMH actions during an extreme cold event, as defined below. This plan also provides guidance for Local Health Departments (LHDs) to support them as they fulfill their roles, however it does not mandate that LHDs perform the suggested actions described.

Maryland Law Regarding Winter Power Termination

Maryland Law (COMAR 20.31.03.03) forbids utility companies from terminating the power of an occupied residential building for non-payment of bills without submitting an affidavit to the Public Service Commission that the termination does not constitute a threat to the life or health of the residential occupants. In addition, PSC forbids in termination for non-payment of bills on any day which the forecast temperature made at 6 a.m. is 32 degrees Fahrenheit or below, through the extreme weather period.

Phase 1: Pre-Winter

Triggers

- Pre-winter activities begin in October.

Surveillance

- The National Weather Service (NWS) determines the cold impact in the forecast. The Maryland Emergency Management Agency (MEMA) monitors data from the Sterling, Pittsburgh, Mt. Holly and Wakefield NWS stations.
- DHMH conducts daily analysis of syndromic surveillance data from hospital emergency departments for indications of an increase in Hypothermia, Frostbite or Carbon Monoxide Poisoning.

DHMH Actions

- DHMH will conduct an annual review of the DHMH Cold Weather Emergency Plan and revise and update as necessary. Plan revisions may include but not be limited to:
 - Coordinate and conduct a conference call with State Partners to review and update planning efforts.
 - Obtain updated shelter contact information where applicable.
- DHMH will provide guidance and recommend best practices to aid jurisdictions in revising local Cold Emergency Plans as requested.
- DHMH will update its website to include accurate LHD contact information.

- DHMH will distribute the revised Cold Emergency Plan and Checklists to Local Health Departments and Planning Partners.
- MSDE, MOSH and MDoA will make revised public education materials available to their stakeholders.

Local Health Department Actions

- LHDs will monitor the NWS for local temperature data.
- LHDs will review planning activities and maintain situational awareness.

Public Information

- DHMH and LHDs will review and revise written and electronic public information materials.
- MOSH will develop public message for outdoor workers in Extreme Cold and what safety precautions should be taken.
 - Modified work rest schedules especially for those employees working in cold environments.
 - Recognition of Hypothermia, Frostbite and Carbon Monoxide Poisoning.
 - Immediate interventions once a cold-related illness is recognized.
 - Preventive steps against the development of cold-related illnesses.

Phase 2: Pre-Event

Triggers

- DHMH and Jurisdictions should consider holding press conferences or issuing a press release on or just prior to the day of the first forecasted extreme cold event, or;
- DHMH and Jurisdictions should launch cold plan activities by the first week of December if no extreme cold events have occurred.

Surveillance

- DHMH and local agencies should monitor weather forecasts for the possibility of predicted weather conditions consistent with extreme cold.
- DHMH will distribute weekly reports and analysis of the public health impact of cold-related illnesses. The weekly reports will be made available to the public at a predetermined time every week. These reports will include but may not be limited to:
 - Temperature Data via the National Weather Service and MEMA.
 - Emergency Department visits for Hypothermia, Frostbite and Carbon Monoxide Poisoning through DHMH's syndromic surveillance system.
 - Number of cold-related and Carbon Monoxide deaths reported by the Office of the Chief Medical Examiner (OCME).
 - Cold Advisory Reference Information.
- MEMA will monitor power outages in the state.

- MEMA will coordinate with local EMAs to monitor large public events with the potential to create a mass casualty incident.
- MIEMSS will monitor EMS systems statewide to monitor and track the number of Hypothermia, Frostbite and Carbon Monoxide poisoning emergency calls.

DHMH Actions

- DHMH will make a press announcement on or just prior to the day of the first extreme cold event or by the third week in December if no extreme cold events have occurred.
- DHMH will review and revise this plan following any extreme cold events as necessary.
- DHMH Office of Healthcare Quality will contact nursing homes to promote winter preparedness, reminding them to check their generators and HVAC systems as well as to remind them to report real or potential concerns and issues.
- DHMH will update the DHMH website with LHD phone numbers and information.
- MSDE, MOSH and MDoA will make revised public education materials available to their stakeholders.

Local Health Department Actions

- LHDs will monitor the NWS for local temperature data.
- LHDs will review planning activities and maintain situational awareness.

Demobilization

- DHMH will proceed to Phase 6 of this plan in March, or when;

Phase 3: Extreme Cold Event – Wind Chill Advisory

Triggers

- The NWS has issued a Wind Chill Advisory, or;
- Temperatures meeting the criteria for a Wind Chill Advisory are likely within the next 12 to 48 hours.

Surveillance

- DHMH will maintain situational awareness on vulnerable facilities.
- DHMH will continue to monitor syndromic surveillance systems and issue the weekly report outlined in Phase 2.
- DHMH and MEMA will monitor NWS forecasts for any indication of Extreme Cold.
- MEMA will monitor power outages.

DHMH Actions

- DHMH will notify the state or jurisdiction expected to be impacted by an extreme cold event.
 - The DHMH advisory will also be sent to other state and local agencies.
 - DHMH may choose to make the advisory public through release to media outlets, posting on select state agency websites and other means deemed appropriate including social media.
- DHMH will review Extreme Cold checklists and begin taking appropriate actions.
- DHMH will coordinate with MIEMSS to issue Facility Resource Emergency Database (FRED) alerts when appropriate.
- DHMH and MEMA will maintain situational awareness and gauge the potential impact of the anticipated event.
- MEMA will notify DHMH of public events with a risk of complications due to Extreme Cold.

Local Health Department Actions

- LHDs will report information regarding local facilities in crisis to DHMH.
- LHDs will notify local extreme cold planning partners, including DSS, Aging, EMA and DFRS.
- LHDs will activate any transportation assistance programs for vulnerable populations to be transported to shelters.
- LHDs will coordinate with EMAs for recommending heightening mitigation protections for or discouraging outdoor public events.
- LHDs will review plans for extra staffing and emergency support services and stage potential resources.
- LHDs will coordinate with relevant organizations to provide outreach to vulnerable populations.
 - Coordinate with existing volunteers and partners for responding to extreme cold.
- LHDs will coordinate public messaging with public access numbers such as non-emergency dispatch, 2-1-1, 3-1-1 or using reverse 9-1-1 systems.
- LHDs will recommend government and schools restrict outdoor activities.

Public Information

- DHMH will coordinate with each jurisdiction on Extreme Cold Event communications.
- LHDs should provide all locally used call centers (9-1-1, 3-1-1, hospital and private ‘Ask a Nurse’ lines) information on transportation options.
- DHMH and LHDs will employ consistent messaging that urges individuals to check on elderly neighbors and family members.
 - If possible, recommend the usage of reverse-9-1-1 systems by local jurisdictions to contact at-risk and vulnerable populations and provide cold advisory warnings.
- DHMH and LHDs will include Pet Emergency Preparedness for cold emergency prevention in messaging. Resources can be found at Ready.gov¹ or other pet preparedness websites.

¹ <http://www.ready.gov/america/getakit/pets.html>

- Local Jurisdictions, MTA and SHA utilize existing digital signage (such as outside firehouses, other public buildings or on public buses) to display concise cold safety tips.
- MOSH will issue cold safety tips for outdoor workers.

Demobilization

- DHMH will revert to Phase 2 when temperatures rise above 20 degrees.

Phase 4: Extreme Cold Event – Wind Chill Warning

Triggers

- The NWS has issued a Wind Chill Warning, or;
- Temperatures meeting the criteria for a Wind Chill Warning are likely within the next 12 to 48 hours, or;
- Temperatures meeting the criteria for a Wind Chill Advisory are expected to continue for three or more days.

DHMH Actions

DHMH will take all the actions outlined in Phase 3: Extreme Cold Event – Wind Chill Advisory and:

- DHMH will engage 2-1-1 as a public access number for cold-related questions and provide 2-1-1 with up-to-date public messaging materials.
- DHMH will conduct conference calls to discuss potential impact of event with stakeholders. The calls may include, but are not limited to:
 - Internal DHMH Staff
 - Local Health Department Staff
 - Other State Agencies
- DHMH and DHR will gather information on Sheltering operations to report to MEMA.
- DHMH and MEMA will operate at an Enhanced Readiness level, in preparation for a Complex Cold Emergency.
- DHMH will supply local health departments with updated lists of licensed facilities for tracking.
- DHR and MDoA will maintain a list of vulnerable non-medical facilities such as assisted living facilities.

Local Actions

- LHDs will provide DHMH with updated information on local shelters.

Demobilization

- DHMH will revert to Phase 2 when temperatures rise above 32 degrees.

Phase 5: Complex Cold Emergency

Triggers

- DHMH and MEMA will use discretion in deciding what conditions constitute a complex cold emergency, which may include, but are not limited to:
 - Significant power outages, or;
 - Extended periods of low temperatures with a Wind Chill of -5°F, or;
 - Severe precipitation during a cold event causing significant hail or snowfall, or;
 - Any other factors that would exacerbate a Cold Emergency.

Surveillance

- DHMH will begin issuing the Daily Cold-Related Illness Surveillance Report through the duration of the emergency.
 - The final Daily Report will be issued the day following the final Cold Advisory day, with surveillance data from the final Cold Advisory day.
 - The disbursement of death data will follow a prescribed flow of information due to the overwhelming number of requests for information during these events. Considerations in the process include, but are not limited to:
 - OCME Death Data will be routed internally to the Office of Preparedness & Response.
 - Local Health Officers or their designee will be notified of the details of deaths in their jurisdiction by DHMH.
 - The daily report is sent to planning partners and posted to the DHMH website.
- DHMH will release death information to the public on daily basis during the duration of an event requiring SEOC activation. This information will be released at a set time to be determined at the beginning of the event.
- MEMA will map cold deaths and 911 calls reported by MIEMSS with Hypothermia, Frostbite and Carbon Monoxide as a chief complaint for use in targeting vulnerable population outreach.
 - MEMA will also monitor power outages, social media, special events and weather.

DHMH Actions

- DHMH will conduct regular conference calls to discuss potential impact of event with stakeholders. The calls may include, but are not limited to:
 - Internal DHMH Staff
 - Local Health Department Staff
 - Other State Agencies
- DHMH will coordinate with MEMA, the Department of Human Resources (DHR), the Department on Aging (MDoA), the Developmental Disabilities Administration (DDA), Mental Health Administration (MHA), Local Health Departments and other organizations as necessary to determine if facilities with vulnerable populations need additional assistance.
 - Facilities include, but are not limited to:

- Dialysis Centers
 - Nursing Homes
 - Senior Assisted Living Facilities
- DHMH will coordinate with MEMA, DHR, MDoA and Local Health Departments to monitor, track and post the locations of shelters statewide.
- MEMA will request information from local EMAs on events that may be affected by the complex cold emergency.
- MEMA will assume incident command for Cold Incident and begin coordinating Emergency Support Functions in support of a response.
- PSC will suspend water and power utility shut-off for occupied buildings during the event.
- VOAD will coordinate with volunteer organizations to gather teams to supplement outreach efforts and/or pass out supplies.
- DHR will open a temporary emergency center for areas that may be without power for an extended period of time as necessary.
- MTA will modify public transportation to be utilized as a heating method for vulnerable groups or to transport them to a shelter.

Local Health Department Actions

- LHDs will notify their EMAs of large-scale public events in the local jurisdiction that have the potential to result in a mass casualty incident.
 - Refer to list maintained from Phase 2.
 - Preposition local assets with the authority to cancel the event should the triggers be reached.
- Local EMAs will notify MEMA, DHMH and MIEMSS of the above events.
- LHDs will cancel or ensure greater mitigation measures for outdoor public events.
- LHDs will expand shelter capacity as necessary and notify state officials.
- Local DSS will open shelters as needed.

Water Shortages

- In the event of a widespread and/or prolonged water shortage, the Jurisdiction's Health Department and the Department of Public Works should consider providing alternative potable water to affected residents. Resources can also be requested through local EMA.
- Consider requesting assistance from the private sector in providing and distributing free water.

Power Outages

- In the event of a widespread and/or prolonged power outage, DHMH will coordinate with MEMA, the Public Service Commission and Power Companies to ensure that facilities with vulnerable population's outlines above receive priority in restoration due to the life-threatening nature of extreme cold in a powerless facility.
- Pharmacy restrictions on the ability to renew prescriptions will be lifted.

Public Information

- MEMA will activate a Joint Information Center (JIC) to address public messaging.
- MEMA and DHMH, through the JIC, will use 2-1-1 or public access numbers to distribute cold emergency information.

Demobilization

- DHMH will revert to a previous phase once the complicating factors have been resolved, or;
- MEMA stands down the SEOC, or;
- DHMH will revert to Phase 5 if a Wind Chill Warning is in effect, or;
- DHMH will revert to Phase 4 if a Wind Chill Advisory is in effect, or;
- DHMH will revert to Phase 2 if temperatures have risen back to 20 degrees.

Phase 6: Post-Winter

The post winter activities typically begin in mid-March and include After Action Reporting and planning for the next operational period.

Triggers

- Post-winter activities begin in March.

DHMH Actions

- DHMH ceases circulating weekly cold reports in March.
- Where applicable, collect After Action Reports from the jurisdictions and determine best practices to be included in the following year's planning efforts.
- Collect, analyze and release statewide surveillance data from the winter for use in future cold planning.
- Review and update the State Cold Plan, including a comprehensive review of local plans and resources, to be completed by October 31st.

Local Health Department Actions

- Cease cold-event monitoring and return shelters to normal hours if applicable.
- Coordinate with DHMH on an annual cold plan review.
- Identify organizations serving high-risk populations that can be utilized in following season.
- Develop or revise information on high-risk individuals.
- Create voluntary registries for individuals, families and neighbors.
- Develop or revise an accessible record on facilities and locations.
- Conduct an evaluation of interventions:

- Review evaluation tools to monitor effectiveness.
 - Shelter usage.
 - Transportation program usage, if available.
 - EMS System usage.

Definitions

Extreme Cold Event – An extreme cold event is a weather condition with excessively low temperatures or a combination of cold temperatures and wind that has the potential to cause cold-related illnesses or injuries. An extreme cold event is defined in hours, a day or series of days when:

- The minimum temperature or wind chill is forecasted to be approximately -5°F or lower,
- Weather or environmental conditions are such that a high incidence of cold-related illnesses or injuries can reasonably be expected.

Complex Cold Emergency – A Complex Emergency is a condition of an Extreme Cold Event with complications requiring additional response. Examples of such complications are power shortages, heavy precipitation (snow or ice) or an extended period of low temperatures combined with strong winds.

Warming centers and Sheltering – The actual definition of a ‘warming center’ may vary from county to county. For the purposes of this plan, a warming center refers to a public building with heat, water and sanitation facilities. However, due to the coldest temperatures occurring overnight, sheltering the homeless is the primary concern in sheltering operations. Sheltering operations may also be employed or expanded during winter storms to reduce the risk to vulnerable populations. Warming centers and shelters will be referred to in this plan as simply ‘shelters’.

Wind Chill – Wind Chill or the apparent temperature is a measure of what the temperature actually feels like. Wind Chill is a factor of both the actual temperature and wind speed, and is the best indicator for a pending extreme cold event. Wind Chill is the key indicator of Extreme Cold by the National Weather Service.²

Wind Chill Advisory - The National Weather Service issues this product when the wind chill could be life threatening if action is not taken. In Maryland wind chill advisories are issued when wind chill temperatures are forecasted to range from -5°F to -20°F.

Wind Chill Warning - The National Weather Service issues this product when the wind chill is life threatening. In Maryland wind chill warnings are issued when wind chill temperatures are forecasted to be below -20°F.

² <http://www.weather.gov/om/windchill/index.shtml>

Cold-related Illness – A Cold-related Illness is a condition caused by extreme cold, usually hypothermia medical condition exacerbated by the cold. Hypothermia is likely at lower temperatures when the subjects are wet due to rain, fog or snow. For the purposes of this plan, Cold-related injuries will be referred to as cold-related Illness.

Hypothermia – When exposed to cold and the mechanisms are unable to replenish the heat that is being lost, a drop in body's core temperature occurs; causing systems such as shivering and mental confusion.

Cold-related Injury – A Cold-related Injury is damage caused by extreme cold, which is known as frostbite. Like hypothermia, frostbite is likely at lower temperatures when the subjects are exposed to the cold as well as being wet due to rain, fog or snow.

Frostbite – Frostbite is the medical condition where localized damage is caused to skin and other tissues due to extreme cold.

Carbon Monoxide Poisoning – Due to the prevalence of heaters and fuel-burning devices during the winter, Carbon Monoxide poisoning presents the greatest risk during the winter months.³

High-Risk Groups – High-Risk Groups are populations that are disproportionately affected by Extreme Cold. These groups include babies sleeping in cold rooms, elderly people with inadequate food, clothing or heating, people who remain outdoors for long periods (homeless, hunters, hikers, etc.), and people who drink alcohol or use illegal drugs.

³ <http://www.crh.noaa.gov/oax/safety/carbonmon.php>